

6DS5

Beam Power Tube

7-PIN MINIATURE TYPE

For Audio Output Service in TV and Radio Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values^a

Heater Voltage, ac or dc	E_h	6.3	V
Heater Current	I_h	0.8	A
Direct Interelectrode Capacitances: ^b			
Grid No.1 to plate	c_{g1-p}	0.19	pF
Input: G1 to (K, G3, G2, H) . .	c_i	9.5	pF
Output: P to (K, G3, G2, H) . .	c_o	6.3	pF

TYPICAL OPERATION AND CHARACTERISTICS

Cathode-Bias Operation

For the following characteristics, see Conditions below:

Zero-Signal Plate Current . . .	I_b	34.5	27	mA
Max.-Signal Plate Current . . .	$I_{b(max.-sig.)}$	32.5	25	mA
Zero-Signal Grid-No.2 Current .	I_{c2}	3.5	3	mA
Max.-Signal Grid-No.2 Current .	$I_{c2(max.-sig.)}$	9	9	mA
Plate Resistance (Approx.) . .	r_p	28000	28000	Ω
Transconductance	g_m	6000	5800	μmho
Load Resistance	R_l	6000	8000	Ω
Total Harmonic Distortion. . .	D_t	10	10	%
Max.-Signal Power Output . . .	P_o	2.8	3.6	W

Conditions:

Heater Voltage	E_h	6.3	6.3	V
Plate Supply Voltage	E_{bb}	200	250	V
Grid-No.2 Voltage	E_{c2}	200	200	V
Cathode-Bias Resistor	R_k	180	270	Ω
Peak AF Grid-No.1 Voltage . .	e_{clm}	7.5	9.2	V

Fixed-Bias Operation

For the following characteristics, see Conditions below:

Zero-Signal Plate Current . . .	I_b	35	29	mA
Max.-Signal Plate Current . . .	$I_{b(max.-sig.)}$	36	32	mA
Zero-Signal Grid-No.2 Current .	I_{c2}	3	3	mA
Max.-Signal Grid-No.2 Current .	$I_{c2(max.-sig.)}$	9	10	mA
Plate Resistance (Approx.) . .	r_p	28000	28000	Ω
Transconductance	g_m	6000	5800	μmho
Load Resistance	R_l	6000	8000	Ω



Electronic
Components

DATA 1
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Total Harmonic Distortion. . . . D_t	9	10	%
Max.-Signal Power Output. . . . P_o	3	3.8	W
<i>Conditions:</i>			
Heater Voltage. E_h	6.3	6.3	V
Plate Voltage. E_b	200	250	V
Grid-No.2 Voltage. E_{c2}	200	200	V
Grid-No.1 (Control-Grid) Voltage. E_{c1}	-7.5	-8.5	V
Peak AF Grid-No.1 Voltage. . . e_{c1m}	7.5	8.5	V

MECHANICAL CHARACTERISTICS

Dimensional Outline	JEDEC 5-3
Maximum Overall Length	2.625 in (66.67 mm)
Maximum Seated Length	2.375 in (60.32 mm)
Maximum Diameter	0.750 in (19.05 mm)
Bulb	T 5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Terminal Connections (See <i>TERMINAL DIAGRAM</i>)	JEDEC Designation 7BZ
Type of Cathode	Coated Unipotential
Mounting Position	Any

MAXIMUM RATINGS – Design-Maximum Values^c

Plate Voltage. E_b	275	V
Grid-No.2 Voltage. E_{c2}	275	V
Grid-No.1 Voltage:		
Positive bias value. E_{c1}	0	V
Plate Dissipation. P_b	9	W
Grid-No.2 Input. P_{g2}	2.2	W
Heater Voltage. E_h	5.7 to 6.9	V
Heater-Cathode Voltage:		
Peak. e_{hkm}	+200	V
DC. E_{hk}	100	V
Envelope Temperature (At hottest point on envelope surface) . . . T_E	250	°C

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:	$R_{g1(ckt)}$	
For fixed-bias operation.	0.1	MΩ
For cathode-bias operation.	1.0	MΩ

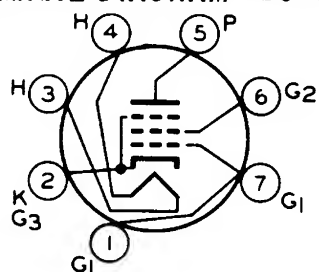
^a Unless otherwise specified.

^b Without external shield. Measured in accordance with the current issue of EIA Standard RS-191.

^c As defined in the current issue of EIA Standard RS-239.

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TERMINAL DIAGRAM - Bottom View



JEDEC 7BZ

Pin 1 - Grid No.1

Pin 2 - Cathode,
Grid No.3

Pin 3 - Heater

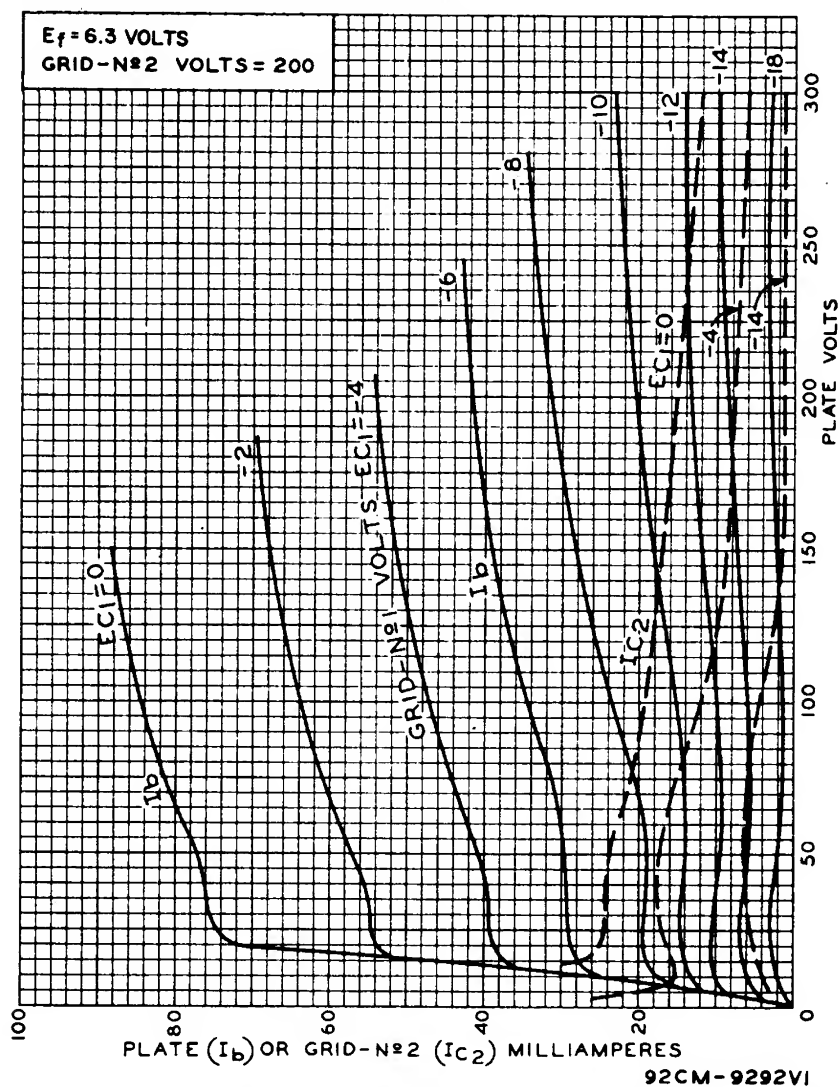
Pin 4 - Heater

Pin 5 - Plate

Pin 6 - Grid No.2

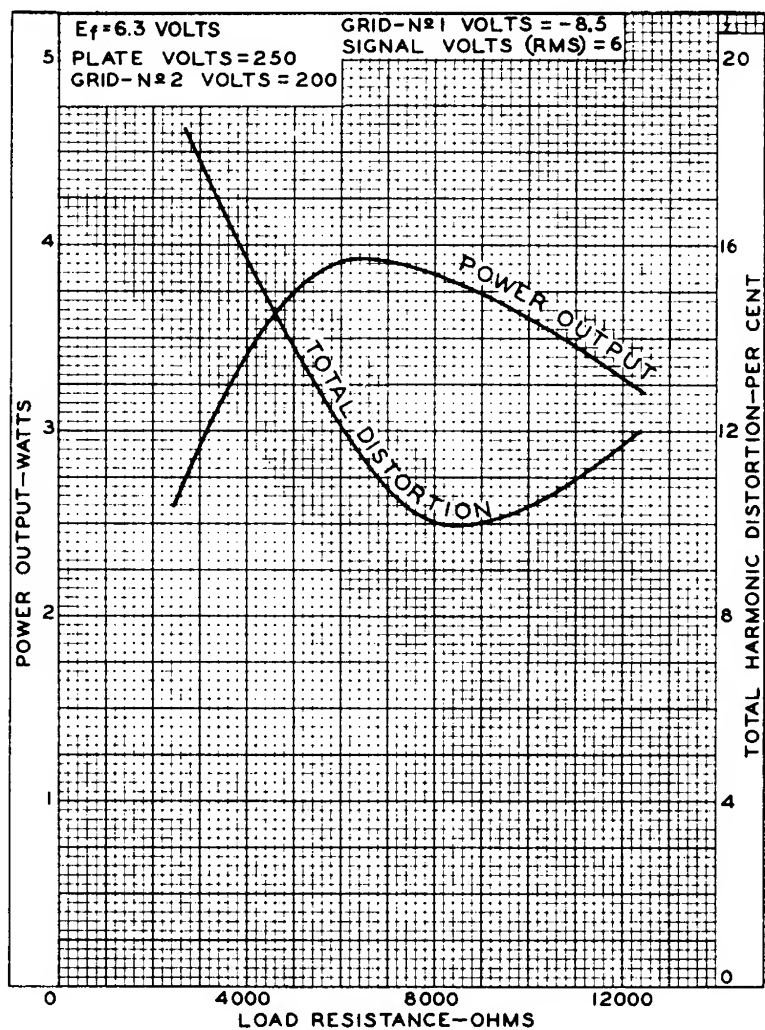
Pin 7 - Grid No.1

AVERAGE CHARACTERISTICS



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OPERATION CHARACTERISTICS



92CM-9293VI